



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,682	11/02/2001	Gunter Hommel	WEM-05401	2591
26339 7590 05/24/2007 MUIRHEAD AND SATURNELLI, LLC 200 FRIBERG PARKWAY, SUITE 1001 WESTBOROUGH, MA 01581			EXAMINER KENNEDY, JOSHUA T	
			ART UNIT 3679	PAPER NUMBER
			MAIL DATE 05/24/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/003,682

Applicant(s)

HOMMEL, GUNTER

Examiner

Joshua T. Kennedy

Art Unit

3679



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 7-10, 13-17, 19-21, 24-35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10, 13-17, 19-21, 24-35, and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

Claims 1-3, 7-10, 13-17, 19-21, 24-35, and 37-39 have been examined.

Claims 4-6, 11, 12, 18, 22, 23, and 36 have been cancelled.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-10, 13-17, 19-21, 24-35, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knohl (US 5,244,325) in view of Wenger (US 3,812,756) and Acres (US 3,221,794).

As to Claim 1. Knohl shows and discloses a device that attaches a first component (21) to a second component (22), comprising:

a sleeve (36) positioned in the first component (21) and being axially fixed in the first component (21); and

a bolt (35) positioned in the sleeve (36), and having a threaded front end (45) that projects outwardly from the sleeve (36) for screwing into a mating thread (23) of the

Art Unit: 3679

second component (22), and which is disposed in the sleeve (36) with a slight radial play and held supported against axial forces,

wherein the bolt (35) has a spring lock washer (55) therearound (see generally figures 2-6, 9 and 10; columns 1-4),

wherein a rear end of the sleeve includes a lead-in cone (60) and, at a rear end of the sleeve (36) in the direction of introduction of the bolt (35), the sleeve (36) includes a collar (49) that projects radially outward, and an end section (50) at a front end of the sleeve (36) having a reduced wall thickness that can be flanged outward (reduced wall thickness as a result of bend deductions inherent in the bent portion; see figures 5-6), and

wherein the sleeve (36) having a first interior section (60) in the direction of introduction of the bolt (35) and an adjoining second interior section (48); an inner diameter of the first interior section (60) substantially coinciding with an outer diameter of the bolt (35); an inner diameter of the second interior section (48) being expanded relative to the inner diameter of the first interior section (60), wherein said inner shoulder (at the bottom of section 60) of the sleeve (36) is formed by a transition from the first interior section (60) to the second interior section (48; see figure 6).

Knohl lacks disclosure that the bolt (35) has a recess in its axial section accommodated in the sleeve and a spring lock washer located in the recess, whereby as the bolt is axially introduced into the sleeve, the spring lock washer is pressed radially by this sleeve into the recess and engages radially behind an inner shoulder of the sleeve for axial support and wherein the recess of the bolt includes a rear deep

section (21) and a flat section (22) for the spring lock washer that co-acts with said lead in cone during introduction of the bolt into the sleeve and co-acts with the inner shoulder of the sleeve during detachment and also that the bolt includes a first shank section and a second shank section that are separated by said recess, and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve. The Examiner notes that the lines 10-12 of claim 1 recite product-by- process limitations. Importantly, the claim is not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113.

Wenger, however, teaches a device having a bolt (10) having a recess (20) and a spring lock washer (21) located in the recess (20), whereby as the bolt is axially introduced into a member (32), the spring lock washer is pressed radially by this member (32) into the recess and engages radially behind an inner shoulder of the member for axial support in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted (see figures 3a,3b, 10, 11,13-15,17 and 19-21, and especially figure 5; see also column 1 lines 13-22; column 2 lines 10-62; column 4 line 38 - column 5 line 47; column 6 line 65 - column 7 line 7; column 8 lines 48-67; column 9 lines 28-30; column 9 line 59 - column 10 line 24; column 11 lines 33-44).

Likewise, Acres teaches a device having a bolt (10) having a recess (20) and a spring lock washer (26) located in the recess (20), whereby as the bolt is axially introduced into a member (42), the spring lock washer (26) is pressed radially by this member (42) into the recess (20) and engages radially behind an inner shoulder (40) of

Art Unit: 3679

the member (42) and wherein the recess of the bolt includes a rear deep section (21) and a flat section (22) for the spring lock washer that is capable of co-acting with said lead in cone during introduction of the bolt into the sleeve and co-acts with the inner shoulder (40) of the sleeve during detachment for axial support in order to "provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring" to easily and effectively secure together two components (see figures 1-5; columns 1-6, especially column 1 line 40 - column 2 line 32), and wherein the bolt includes a first shank section (14) and a second shank section (22) that are separated by said recess (20) and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve (Col 4, Lines 45-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Knoll with a bolt having a recess including a rear deep section and a flat section and a spring lock washer located in the recess, whereby as the bolt is axially introduced into a member, the spring lock washer is pressed radially by this member into the recess and engages radially behind an inner shoulder of the member for axial support in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted as taught by both Wenger and Acres in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted and to provide a captive fastener

Art Unit: 3679

having a novel groove configuration for wholly or partially receiving a retaining ring to easily and effectively secure together two components.

As to Claims 2, 3, and 10. Wenger further teaches a device (see figures 3a, 3b, 10, 11, 13-15, 17 and 19- 21, and especially figure 5) including a bolt (10) which has recess (20) including a rear deep section (b) in a direction of introduction of the bolt (10) and a front flat section (c) adjoining the rear deep section (b); a radial depth of the rear deep section corresponding to a radial material thickness of a spring lock washer (21), and a radial depth of the flat section (c) corresponding to approximately half of the radial material thickness of the spring lock washer (21). Also the recess (20) including a stop shoulder a formed on the rear end in the direction of introduction of the bolt (10) and a support shoulder (see figure 5) formed on a front end (T), the stop shoulder (a) and the support shoulder each being located in a plane perpendicular to the axis of the bolt (10). It would have been obvious to one of ordinary skill in the art to provide the device of Knohl with a recess as taught by Wenger in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted (see also column 1 lines 13-22., column 2 lines 10-62; column 4 line 38 - column 5 line 47; column 6 line 65 - column 7 line 7; column 8 lines 48-67; column 9 lines 28-30; column 9 line 59 - column 10 line 24; column 11 lines 33-44).

Similarly, Acres teaches a device including a bolt (10) which has recess (20) including a radial depth of the rear deep section (21) corresponding to a radial material

Art Unit: 3679

thickness of a spring lock washer (26), and a radial depth of the flat section (22) corresponding to approximately half of the radial material thickness of the spring lock washer (26). In addition the recess (20) includes a stop shoulder (13) formed on a rear end in the direction of introduction of the bolt (10) and a support shoulder (24) formed on a front end, the stop shoulder (23) and the support shoulder (24) each being located in a plane perpendicular to the axis of the bolt (see figure 1). It would have been obvious to one of ordinary skill in the art to provide the device of Knohl with a recess as taught by Wenger in order to "provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring" to easily and effectively secure together two components (see figures 1-5; columns 1-6, especially column 1 line 40 - column 2 line 32).

As to Claim 13. Knohl specifically shows that the member into which the bolt is inserted may be a sleeve (36), but does not disclose the sleeve having front and rear shank sections. Wenger teaches the bolt (10) having a rear first shank section (S) in the direction of introduction that includes an outer diameter coinciding with the inner diameter of a first section of the member (32) into which it is inserted, and a front second shank section (T) that is separated from the first shank section (S) by the recess (20) having an outer diameter that is reduced relative to the outer diameter of the first shank section (S). It would have been obvious to one of ordinary skill in the art to provide the device of Knohl with a sleeve as taught by Wenger to aid in assembly of the attachment device, specifically the insertion of the ring (21).



As to Claims 9 and 16. Knohl further shows and discloses that the spring lock washer (55) includes an axial slot, an outer diameter of the spring lock washer (D6) in an unstressed state being equal to an inner diameter of a second section (D4) of the member into which the bolt (40) is inserted, and a material thickness of the spring lock washer (Fig 8) and a width of the slot being dimensioned in such a way that the spring lock washer is capable of being compressed to an outer diameter which is smaller than an inner diameter of a first section (60) of the member into which the bolt is inserted.

As to Claim 17. Knohl shows and discloses an attachment device, comprising a substantially cylindrical sleeve (36) having a hollow interior portion with a first interior section (49), an adjacent second interior section (48), and an inner shoulder (60); an elongated bolt (35) that fits in the sleeve (36) an elastic member (55) disposed on the bolt (35; see generally figures 2-6, 9 and 10; columns 1-4).

wherein a rear end of the sleeve includes a lead-in cone (60) and, at a rear end of the sleeve (36) in the direction of introduction of the bolt (35), the sleeve (36) includes a collar (49) that projects radially outward, and an end section (50) at a front end of the sleeve (36) having a reduced wall thickness that can be flanged outward (reduced wall thickness as a result of bend deductions inherent in the bent portion; see figures 5-6).

Knohl lacks disclosure of a recess formed on a portion of the bolt; and the elastic member disposed in the recess, wherein the elastic member radially compresses inwardly in response to the bolt being disposed in the first interior section and wherein the elastic member radially decompresses outwardly to enable the elastic member to

Art Unit: 3679

engage the inner shoulder in response to the bolt being disposed in the second interior section and wherein the recess of the bolt includes a rear deep section (21) and a flat section (22) for the spring lock washer that co-acts with said lead in cone during introduction of the bolt into the sleeve and co-acts with the inner shoulder of the sleeve during detachment and also that the bolt includes a first shank section and a second shank section that are separated by said recess, and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve..

Wenger, however, teaches a device having a bolt (10) having a recess (20) formed on a portion thereof; an elastic member (21) disposed in the recess (20), wherein the elastic member (21) radially compresses inwardly in response to the bolt (10) being disposed in the first interior section (32a) and wherein the elastic member (21) radially decompresses outwardly to enable the elastic member (21) to engage a shoulder in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted (see figures 3a,3b, 10,11,13-15,17 and 19-21, and especially figure 5; see also column 1 lines 13-22; column 2 lines 10-62; column 4 line 38 - column 5 line 47; column 6 line 65 - column 7 line 7; column 8 lines 48-67; column 9 lines 28-30; column 9 line 59 - column 10 line 24; column 11 lines 33-44).

Likewise, Acres teaches a device having a bolt (10) having a recess (20) formed in a portion thereof and an elastic member (26) disposed in the recess (20), wherein the elastic member (26) radially compresses inwardly in response to the bolt (10) being

Art Unit: 3679

disposed in the first interior section (36) and wherein the elastic member (26) radially decompresses outwardly to enable the elastic member (26) to engage the inner shoulder (40) in response to the bolt (10) being disposed in the second interior section (38) and wherein the recess of the bolt includes a rear deep section (21) and a flat section (22) for the spring lock washer that co-acts with said lead in cone during introduction of the bolt into the sleeve and co-acts with the inner shoulder of the sleeve during detachment in order to "provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring" to easily and effectively secure together two components (see figures 1-5; columns 1-6, especially column 1 line 40 - column 2 line 32), and wherein the bolt includes a first shank section (14) and a second shank section (22) that are separated by said recess (20) and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve (Col 4, Lines 45-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Knoll with a bolt having a recess including a rear deep section and a flat section and a spring lock washer located in the recess, whereby as the bolt is axially introduced into a member, the spring lock washer is pressed radially by this member into the recess and engages radially behind an inner shoulder of the member for axial support in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted as taught by both Wenger and Acres in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being

Art Unit: 3679

automatically operative once the bolt is fully inserted and to provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring to easily and effectively secure together two components.

As to Claim 19. Knohl further shows the collar (49) conformingly contacting a first component (21; see figures 2 and 3).

As to Claim 20. Knohl further shows a portion (49) of the sleeve (36) securely engaging a portion of a first component (21; see figures 2 and 3).

As to Claim 21. Knohl further shows the portion (49) of the sleeve (36) is constructed and arranged to expand outward in a radial direction to engage the first component (21).

As to Claim 24. Knohl further shows the sleeve (36) further includes a third portion (50) having a third interior diameter greater than the second portion (48), the third portion being adjacent to the second portion (see figures 5, 6, 9, 10).

As to Claim 25. Knohl further shows the third portion (50) extends into at least a portion of the first component (21; see figures 2 and 3).

Art Unit: 3679

As to Claim 26. Knohl further shows and discloses the third portion (50) is constructed and arranged to expand radially outward to securely attach the sleeve (36) to the first component (21; see figures 2 and 3).

As to Claim 27. Knohl discloses the bolt (10) includes a stop shoulder (57) and wherein the inner shoulder (60) cooperates with the stop shoulder (57) to apply approximately equal and oppositely directed forces on the elastic member to retain the bolt at a predetermined position (see figure 5).

As to Claim 28. Knohl discloses the bolt having a stop should but does not disclose the a rear deep section being formed adjacent to the stop shoulder and a conically expanding section that tapers outwardly from the rear deep section.

Wenger further teaches a recess (20) including a rear deep section (b) formed adjacent to a stop shoulder (a) and a conically expanding section (c) that tapers outwardly from the rear deep section (b) to provide a positive lock for the ring against the edge of the sleeve instead of expanding the ring to drive it out of the recess (10; see figures 3a,3b,10, 11 ,13-15,17 and 19-21; Col 5, Lines 42-47). It would have been obvious to one of ordinary skill in the art to modify the recess of Knohl to have a conically expanding section as taught by Wenger to provide a positive lock for the ring against the edge of the sleeve instead of expanding the ring to drive it out of the recess.

Art Unit: 3679

As to Claim 29. Knohl further shows the bolt (35) further includes an engagement head (42) formed on an end thereof.

As to Claims 30 and 31. Knohl further shows the bolt (35) including a threaded engagement member (45) formed at all end thereof that releasably engages a first component (21) coupled to a second component (22) by the bolt (35; see figures 2 and 3).

As to Claim 32. Knohl further shows the elastic member (55) being a spring steel split ring (see column 3 line 61 - column 4 line 7).

As to Claim 35. Knohl shows and discloses an attachment device, comprising an elongated bolt (35); means for accepting the elongated bolt (36); an elastic member (55) disposed on the bolt; means (42,45) for retaining the elastic member (55) formed on the bolt; means (60) for engaging the elastic member (55),

wherein a rear end of the means for accepting the elongated bolt (36) includes a lead-in cone (60) and, at a rear end of the means for accepting the elongated bolt (36) in the direction of introduction of the bolt (35), the means for accepting the elongated bolt (36) includes a collar (49) that projects radially outward, and an end section (50) at a front end of the means for accepting the elongated bolt (36) having a reduced wall thickness that can be flanged outward (reduced wall thickness as a result of bend deductions inherent in the bent portion; see figures 5-6).

Knohl lacks explicit disclosure of the elastic member (55) radially compressing inwardly in response to the bolt being disposed in a first interior section of the means (36) for accepting the bolt (35), wherein the elastic member radially decompresses outwardly to enable the elastic member to engage the inner shoulder in response to the bolt being disposed in a second interior section of the means 36 for accepting the bolt 35, and wherein the recess of the bolt includes a rear deep section (21) and a flat section (22) for the spring lock washer that co-acts with said lead in cone during introduction of the bolt into the means for accepting the elongated bolt and co-acts with the inner shoulder of the means for accepting the elongated bolt during detachment and also that the bolt includes a first shank section and a second shank section that are separated by said recess, and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve.

Wenger, however, teaches a device having a bolt 10 having a recess 20 formed on a portion thereof; an elastic member 21 disposed in the recess 20, wherein the elastic member 21 radially compresses inwardly in response to the bolt 10 being disposed in the first interior section 32a and wherein the elastic member 21 radially decompresses outwardly to enable the elastic member 21 to engage a shoulder in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted (see figures 3a, 3b, 10, 11, 13-15, 17 and 19-21, and especially figure 5); see also column 1 lines 13-22; column 2 lines 10-62; column 4 line 38 - column 5 line 47; column 6 line 65 - column 7

Art Unit: 3679

line 7; column 8 lines 48-67; column 9 lines 28-30; column 9 line 59 - column 10 line 24; column 11 lines 33-44).

Likewise, Acres teaches a device having a bolt (10) having a recess (20) formed in a portion thereof and an elastic member (26) disposed in the recess (20), wherein the elastic member (26) radially compresses inwardly in response to the bolt (10) being disposed in the first interior section (36) and wherein the elastic member (26) radially decompresses outwardly to enable the elastic member (26) to engage the inner shoulder (40) in response to the bolt (10) being disposed in the second interior section (38), and wherein the recess of the bolt includes a rear deep section (21) and a flat section (22) for the spring lock washer that co-acts with said lead in cone during introduction of the bolt into the means for accepting the elongated bolt and co-acts with the inner shoulder of the means for accepting the elongated bolt during detachment in order to "provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring" to easily and effectively secure together two components (see figures 1-5; columns 1-6, especially column 1 line 40 - column 2 line 32), and wherein the bolt includes a first shank section (14) and a second shank section (22) that are separated by said recess (20) and wherein an axial length of said first shank section of the bolt corresponds to an axial length of the first interior section of the sleeve (Col 4, Lines 45-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Knoll with a bolt having a recess including a rear deep section and a flat section and a spring lock washer located in the recess,



Art Unit: 3679

whereby as the bolt is axially introduced into a member, the spring lock washer is pressed radially by this member into the recess and engages radially behind an inner shoulder of the member for axial support in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted as taught by both Wenger and Acres in order to allow a bolt with a locking means thereon to pass into a workpiece, such locking means being automatically operative once the bolt is fully inserted and to provide a captive fastener having a novel groove configuration for wholly or partially receiving a retaining ring to easily and effectively secure together two components.

As to Claim 37. Knohl further shows the means (36) for accepting the bolt (35) further including means (49 or 50) for being securely engaged to a portion of a first component (21).

As to Claim 38. Knohl further shows the bolt (35) including means (45) for releasably engaging a second component (22; see figures 2-3).

As to Claims 7, 14, 33, 39. Knohl further includes the means (36) for accepting the bolt (35) being a deep drawn part. The Examiner notes that the method of forming the device is not germane to the issue of patentability of the device itself.

As to Claims 8, 15, 34. Knohl further shows the sleeve (36), the bolt (35) and the spring lock washer (55) being made of steel.

**Response to Arguments**

Applicant's arguments filed 4/23/2007 have been fully considered but they are not persuasive.

As to Claims 1, 17, and 35, Applicant argues:

*"Wenger does not teach a device having a sleeve. Therefore, a bolt cannot be fixed axially in the first component by a sleeve in order to be threaded with its front end into a second component. Since Wenger does not show a sleeve, Applicant submits that there is also no teaching in respect of the axial length of the bolt in relation to an axial length of a first interior section of a sleeve." (Page 17)*

Examiner points out that it is Knohl that provides the sleeve and the bolt member (and the attributes, such as length, thereof) and that neither Wenger nor Acres is required to teach such limitations. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 425, 08 USPQ 871, 881 (CCPA 1981). Moreover, it is well settled that a conclusion of obviousness may be based on common knowledge and common sense of the person in a particular reference. *In re Bozek* 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Wenger is being applied to Knohl to teach that a groove can be provided on a bolt to house a retaining ring to provide "a very high degree of resistance to withdrawal and retains the locking function even under adverse conditions...It is

Art Unit: 3679

applicable to many different environments and broad fields of use..." (Col 2, Lines 56-67). The groove/ring locking combination is the teaching from Wenger. As noted above, this can be applied to any case where such a lock is needed. In this case that combination is used with the bolt/sleeve combination of Knohl. Acres teaches the same principle.

Applicant further argues:

*"not only are the first component and the second component not fixed together any longer, but rather, are separated actively from each other. None of the prior art citations show such an active separation of the two components only by screwing the bolt for detachment...One can clearly see that according to Knohl and Acres the first component and the second component remain in contact when the bolt is turned out from the threaded hole of the second component. Whereas according to the presently-claimed invention the first component and the second component are pressed away from each other when unscrewing the bolt from the second Component as a result of the recited features of the sleeve and bolt and their recited configurations with respect to the first and second components. The Wegner reference does not overcome the deficiencies of the Knohl and Acres references with respect to the presently-claimed invention."*  
(Pages 18-19)

Examiner notes that nowhere in the claim limitations is it required to have an *"active separation of the two components only by screwing the bolt for detachment"*. Even if the claims did require such a limitation, Acres teaches that "if such a jack screw action is desired that such dimensions may be adjusted so that disengagement of captive screw assembly 32 from second member 46 will separate first member 34 from second member 46" (Col 6, Lines 19-23). Thus, Wenger would not have to overcome such a purported deficiency since Acres teaches that limitation. Which also supports the Examiners previous position that the axial lengths of the first and second sections of the

Art Unit: 3679

screw are merely seen to be an obvious design consideration within the art dependent upon the specific application the fastener is being used for.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua T. Kennedy whose telephone number is (571) 272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JTK  
5/10/2007



DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600